UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/414,996	10/07/1999	CHARLES SLATER	CISCO-1341	4137

7590 11/05/2002

DAVID B RITCHIE
D'ALESSANDRO AND RITCHIE
P O BOX 640640
SAN JOSE, CA 951640640

EXAMINER	
FOX, JAMAL A	
ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/414,996	Applicant(s) SLATER, CHARLES
	Examiner Jamal A Fox	Art Unit 2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/07/99* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4, 6-9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: In Fig. 1, reference signs "R1", "R2", "R3", and "R4" are not mentioned in the written description. In Fig. 13B, reference signs "Ethernet Packet", "24", "Preamble", "26", "Start of Frame Delimiter", "30", "Source Address", "32", "Length of Data Field", "36", "Pad", "38", "Checksum", "102", "4-byte Hop Count", "104", "6-byte Dest. Address", "106", and "6-byte Source Address" are not mentioned in the written description. In Fig. 13C, reference signs "Ethernet Packet", "24", "Preamble", "26", "Start of Frame Delimiter", "30", "Source Address", "32", "Length of Data Field", "36", "Pad", "38", "Checksum", "112", "6-byte Dest. Addr.", "114", and "6-byte Src. Addr" are not mentioned in the description. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract not exceed **150 words** in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,377,987 to Kracht. Referring to claim 1, Kracht discloses a method for detecting the path to a first network device [see column 2 lines 22-37] receiving a data packet containing a hop count [see column 2 lines 47-63], a destination Ethernet address corresponding to said first network device [see column 9 lines 54-67], and a source Ethernet address corresponding to a second network device [see column 9 lines 54-67]; modifying said hop count to form a modified data packet [column 3 lines 7-24], and examining said destination Ethernet address [see column 9 lines 54-67] to identify one or more ports on a network device receiving said data packet to forward information to said destination Ethernet address [see column 9 lines 54-67]; and forwarding said modified data packet through said ports [column 3 lines 7-24].

Referring to claim 2, Kracht discloses the method of claim 1, wherein said hop

Count [see column 2 lines 47-63] is not modified if said destination Ethernet address [see column 9 lines 54-67] is the same as the Ethernet address [see column 9 lines 54-67] of said network device receiving said data packet [see column 2 lines 22-37].

Referring to claim 3, Kracht discloses the method for detecting the path to a first network device [see column 2 lines 22-37], comprising the steps of: transmitting from a second network device a data packet containing a hop count [see column 2 lines 47-63], a destination Ethernet address corresponding to said first network device [see column 2 lines 22-37], and a source Ethernet address corresponding to said second network device[see column 2 lines 22-37]; receiving in a third network device said data packet [see column 2 lines 22-37], modifying said hop count to form a modified data packet [see column 11 lines 48-59], and examining said destination Ethernet address to identify one or more ports on said third network device to forward information to said destination Ethernet address [see column 9 lines 54-67]; and forwarding said modified data packet from said third network device through said ports [see Fig. 2A, Fig. 2B, Fig. 2C, Fig. 4, Fig. 5A, and Fig. 5B].

Referring to claim 4, Kracht discloses the method of claim 3, wherein said third network device modifies said hop count [see column 2 lines 47-63] in said data packet [see column 2 lines 22-37] before forwarding said modified data packet [column 3 lines 7-24].

Referring to claim 5, Kracht discloses an apparatus for detecting the path to other network devices [see column 2 lines 22-37], comprising: discovery protocol logic for receiving, processing, and sending discovery protocol packets to neighboring network

devices [see column 2 lines 22-37]; packet redirection logic for examining the hop count, source address, and destination address field of Ethernet packets under control of a configuration and management interface and for forwarding said Ethernet packets to other network devices in accordance with said source and destination addresses [see column 3 lines 25-34].

Referring to claim 6, Kracht discloses an apparatus of claim 5, further comprising logic for transmitting a hop probe message containing an initial hop count, the destination Ethernet address of the desired station, and the source address of said apparatus in the source address field [see Fig. 10].

Referring to claim 7, Kracht discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for detecting the path to a first network device, the method comprising [see Fig. 10 reference sign 1010]: transmitting from a second network device a data packet containing a hop count, a destination Ethernet address corresponding to said first network device, and a source Ethernet address corresponding to said second network device [see Fig. 10]; receiving in a third network device said data packet [see Fig. 6A, 6B, and 6C], modifying said hop count to form a modified data packet, and examining said destination Ethernet address to identify one or more ports on said third network device to forward information to said destination Ethernet address [see Fig. 2A, 2B, and 2C]; and forwarding said modified data packet from said third network device through said ports [see Fig. 2B, and 2C].

Referring to claim 8, Kracht discloses a method for detecting the path to a first network device, comprising the steps of [see column 2 lines 22-37]: 1) initializing a hop count [see Fig. 9]; 2) setting a first destination Ethernet address field to be equal to the Ethernet address of said first network device [see Fig. 9]; 3) setting a first source Ethernet address field to be equal to the Ethernet address of second network device [see Fig. 9]; 4) transmitting from said second network device a data packet containing said hop count, said first destination Ethernet address, and said first source Ethernet address to adjacent network devices [see Fig. 9]; 5) receiving at said second network device a reply data packet containing a second destination Ethernet address corresponding to the Ethernet address of said second network device and a source Ethernet address corresponding to the Ethernet address of one of said adjacent network devices [see Fig. 9].

Referring to claim 9, Kracht discloses the method of claim 8, wherein if said second source Ethernet address in said reply data packet is not equal to said Ethernet address of said first network device, said hop count is modified is modified and steps 4 and 5 are repeated [see Fig. 9].

Referring to claim 10, Kracht discloses the method according to claim 1, wherein said first network device is a LAN switch [see Fig. 1].

Referring to claim 11, Kracht discloses the method according to claim 3, wherein said first network device is a LAN switch [see Fig. 1].

Referring to claim 12, Kracht discloses the method according to claim 3, wherein said second network device is a LAN switch.

Referring to claim 13, Kracht discloses the method according to claim 3, wherein said third network device is a LAN switch [see Fig. 1].

Referring to claim 14, Kracht discloses the apparatus according to claim 5, wherein said apparatus is a LAN switch [see Fig.1].

Referring to claim 15, Kracht discloses the apparatus according to claim 6, wherein said apparatus is a LAN switch [see Fig. 1].

Referring to claim 16, Kracht discloses the method according to claim 8, wherein said first network device is a LAN switch [see Fig. 1].

Referring to claim 17, Kracht discloses the method according to claim 8, wherein said network device is a LAN switch [see Fig. 1].

Referring to claim 18, Kracht discloses a cluster of network devices, comprising: a first network device in said cluster capable or receiving a data packet containing a hop count, a destination Ethernet address corresponding to a second network device in said cluster to which a path is to be determined, and a source Ethernet address corresponding to a third network device in said cluster [see Fig. 7], wherein said first network modifies said hop count to form a modified data packet [column 3 lines 7-24], examines said destination Ethernet address to identify one or more ports on said first network device to forward information to said destination Ethernet address; and forwards said modified data packet [column 3 lines 7-24] through said port or ports [see Fig. 2A, 2B, 2C, Fig. 4, Fig. 5A, 5B].

Referring to claim 19, Kracht discloses the cluster of network devices according to claim 18, wherein said first network device does not modify said hop count if said

destination Ethernet address is the same as the Ethernet address of said first network device [see Fig. 10].

Referring to claim 20, Kracht discloses the cluster of network devices according to claim 18, wherein said first network device is a LAN switch [see Fig. 1].

Referring to claim 21, Kracht discloses the cluster of network devices according to claim 20, wherein said second and third network devices are LAN switches [see Fig. 1].

Conclusion

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 305-3988, (for formal communications intended for entry)

Or:

(703) 305-3988 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. 22202, Sixth Floor (Receptionist).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (703) 305-5741. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

872-9314 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Jamal A. Fox